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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MIKAEL BISGAARD-BOHR and SCOTT WOODROOFE
CUNNINGHAM

Appeal 2009-004330
Application 09/739,994¹
Technology Center 2100

Before HOWARD B. BLANKENSHIP, JEAN R. HOMERE, and
CAROLYN D. THOMAS, *Administrative Patent Judges*.

THOMAS, *Administrative Patent Judge*.

DECISION ON APPEAL²

¹ Application filed December 18, 2000. The real party in interest is Teradata US, Incorporated.

² The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134 of the Examiner's final decision rejecting claims 1, 6-9, 14-17, 22-27, which are all the claims remaining in the application, as claims 2-5, 10-13, and 18-21 are cancelled. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We AFFIRM.

The present invention relates to a data model for analyzing retail transactions using Gaussian Mixture Models in a distributed relational data mining system. (Spec., 1:23-24.)

Claim 1 is illustrative:

1. A computer-implemented data mining system, comprising:
 - a relational database managed by a relational database management system for storing retail transactional data;
 - a data model that defines the manner in which said retail transactional data is stored and organized within said relational database, said data model comprising a basket database table that contains summary information about the retail transactional data, an item database table that contains information about individual items referenced in the retail transactional data, and a department database table that contains aggregate information about the retail transactional data, and the data model is mapped to aggregate the transactional data for cluster analysis of shopping behavior; and
 - wherein the cluster analysis groups the retail transactional data into coherent groups according to perceived similarities in the retail transactional data and presents the results of said cluster analysis to a user.

Appellants appeal the following rejections:

1. Claims 1, 6-9, 14-17, and 22-24 under 35 U.S.C. § 103(a) as unpatentable over Chadha (US 6,301,575, Oct. 9, 2001)(hereinafter Chadha) and Bruce Moxon, Oreview.com, Data Mining: The Golden Promise, <http://www.oreview.com/9706moxn.htm> (June 1997)(hereinafter Moxon); and
2. Claims 25-27 under 35 U.S.C. § 103(a) as unpatentable over Chadha and Moxon further in view of Fayyad (US 6,263,337 B1, July 17, 2001).

FACTUAL FINDINGS

Chadha

1a. Chadha discloses that “[t]he mining data was drawn from sales data of a retail stored chain, with transactions drawn over various periods of time. The data has an average of 12 items per sale.” (Col. 15, ll. 21-24.)

1b. Chadha discloses that “[t]he Combinations operator takes a set of items and a number I as input, and returns the different combinations of size I from the input set of items as rows in a new table.” (Col. 9, l. 16-19.)

1c. In Chadha, “[o]ne of the columns in the multi-column data store represents a transaction, and each of the remaining columns in the multi-column data store represents elements of that transaction.” (Col. 10, ll. 47-51.)

Moxon

2. Moxon discloses that “[d]ata mining employs a computer-driven, discovery-based approach in which pattern-matching algorithms are used to determine the key relationships in the data. These discovery-based

techniques are used to develop models that expose fundamental interrelationships found in the data.” (page 4.)

ANALYSIS

Grouping of Claims

In the Brief, Appellants argue claims 1, 6-9, 14-17, and 22-27 as a group (App. Br. 6-8). For claims 6-9, 14-17, and 22-27, Appellants repeat the same argument made for claim 1. We will, therefore, treat claims 6-9, 14-17, and 22-27 as standing or falling with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(vii). *See also In re Young*, 927 F.2d 588, 590 (Fed. Cir. 1991).

Issue 1: Did the Examiner err in finding that the combination of Chadha and Moxon, specifically Chadha, discloses a basket database table that contains summary information about the retail transactional data?

Appellants contend that Chadha “describes a test performed utilizing mining data drawn from sales data of a retail store chain, with transactions drawn over various periods of time. It is not seen that this is equivalent to ‘a basket database table that contains summary information about the retail transactional data’ recited in each claim of the present application.” (App. Br. 7.)

The Examiner finds that Chadha discloses that “[t]he data has an average of 12 items per sale as summary information about transactional data.” (Ans. 5) (citation omitted.)

While Appellants contend that the cited portion of Chadha is not equivalent to “a basket database table that contains summary information,” Appellants have not specifically addressed “why” it is not. Instead,

Appellants merely argue that Chadha's cited portion does not teach or suggest the above-noted limitations without providing any meaningful analysis that explains why the Examiner erred. (App. Br. 7.) A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim. *See* 37 C.F.R. § 41.37(c)(1)(vii). We note that arguments which Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived.

Chadha discloses that the mining data used covers transactions over various periods of time (FF 1a). In other words, the data is a summary of transactions drawn over various periods of time. In Appellants' Specification, Fig. 2 illustrates that summary information includes a transaction time. Thus, we find that the claimed summary information reads on Chadha' data drawn over periods of time.

Issue 2: Did the Examiner err in finding that the combination of Chadha and Moxon, specifically Chadha, discloses a department database table that contains aggregate information about the retail transactional data?

Appellants contend that in the cited portions of Chadha, "[i]t is not seen that this is equivalent to 'a department database table that contains aggregate information about the retail transaction data.'" (App. Br. 8.)

The Examiner found that Chadha discloses "each item[]sets of data being a combination (aggregate) of the number of rows of multi-column data store." (Ans. 15.)

Again, as noted *supra*, Appellants have not specifically addressed “why” the Examiner has erred, i.e., why Chadha’s multi-column data is not equivalent to the claimed “department database table” limitation. Instead, Appellants merely argue that Chadha’s cited portion does not teach or suggests the above-noted limitations without providing any meaningful analysis. However, the Examiner has shown that Chadha discloses a data mining system that aggregates many elements of multiple transactions (Ans. 15).

For example, Chadha discloses a “combination operator” that aggregates data sets (FF 1b) and a data store that identifies transactions and elements of the transactions (FF 1c). Thus, we find that the Examiner has reasonably set forth an initial *prima facie* case of obviousness for the claimed features.

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner’s position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) (“On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.”) (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)). Therefore, we look to Appellants’ Brief to show error in the proffered *prima facie* case. Here, we find that no such showing or evidence has been offered.

Issue 3: Did the Examiner err in finding that the combination of Chadha and Moxon, specifically Moxon, discloses that the data model is

mapped to aggregate the transactional data for cluster analysis of shopping behavior?

Appellants contend that “[i]t is not seen, however, that the cited text and figure of [Moxon] describes or illustrates the limitation of a data model mapped ‘to aggregate the transactional data for cluster analysis of shopping behavior,’ recited in each claim of the present application.” (App. Br. 8.)

The Examiner found that Moxon discloses “matching algorithms [that] are used in data mining system[s] to determine the key relationships in the data, the models are used [to] develop predictive classifiers as shopping trend, behavior, etc.” (Ans. 6.)

Once again, as noted *supra*, Appellants have not specifically addressed “why” the Examiner’s findings are in error. The Examiner found that Moxon discloses a model that shows key relationships in data. We agree.

Specifically, Moxon discloses using pattern-matching algorithms to determine relationships in the data and a discovery-based technique to develop models (FF 2). Appellants have not shown how such teachings are distinguishable from the claimed “analysis of shopping behavior.” As noted *supra*, Appellants have the burden on appeal to the Board to demonstrate error in the Examiner’s position. Here, Appellants have not demonstrated any error.

Thus, based on the record before us, we find that Appellants have not shown that the Examiner erred in rejecting claim 1. Accordingly, we affirm

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the rejection of claim 1, as well claims 6-9, 14-17, and 22-27, which fall therewith.

DECISION

We affirm the Examiner's § 103 rejections.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2010).

AFFIRMED

Erc

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